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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,744	03/05/2002	Glen Hush	M4065.0485/P485	7015

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EXAMINER
LE, THONG QUOC

ART UNIT	PAPER NUMBER
2818	

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/087,744	HUSH ET AL.	
	Examiner	Art Unit	
	Thong Q. Le	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-13,16-21,24,27-32,35-41 and 44-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-4,6-13,16-21, 24, 45-48* is/are allowed.

6)☒ Claim(s) *27,36,49 and 50* is/are rejected.

7)☒ Claim(s) *28-32,35,37-41 and 44* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 May 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5,6,7* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Pre-amendment filed on November 22, 2002 has been entered.

2. Claims 1-4, 6-13,16-21,24, 27-32,35-41,44-50 are presented for examination.

Information Disclosure Statement

2. This office acknowledges receipt of the following items from the Applicant:

Information Disclosure Statement (IDS) filed on August 15 2002.

Information Disclosure Statement (IDS) filed on September 26, 2002.

Information Disclosure Statement (IDS) filed on November 22, 2002.

3. Information disclosed and list on PTO 1449 was considered.

Drawings

3. The corrected or substitute drawings were received on May 20, 2002. These drawings are acceptable.

Specification

4. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 27, 36 are rejected under 35 U.S.C. 102(b) as being anticipated by BuerGer, Jr. (Pub. U.S. Patent No. 2002/0050606).

Regarding claims 27, 36, Buerger, Jr. discloses a semiconductor memory structure (Figure 1) comprising:

a processor (it is inherent in any computer system, for example, Harshfield US Patent No. 5,818,749)

a column line (Figure 1, 4) and a row line (Figure 1, 5) associated with a programmable conductor random access memory cell;

a programmable conductor memory element (Figure 1, 2) , a first terminal of which is coupled to the column line and a second terminal of which is coupled to a first of reverse connected diode pair (Figure 1, 3a, 3b), wherein a second side of reverse connected diode pair is coupled to the row line (Figure 1) ; and

a sense amplifier (Column 4, paragraph 0057) for comparing a voltage on the column line with a reference voltage during read operation to determined a logic state of the programmable conductor memory element.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 49-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Harshfield (U.S. Patent No. 5,818,749).

Regarding claims 49-50, Harshfield discloses a processor system comprising:

a processor (Figure 2, 24, Column 1, lines 26-30); and

a semiconductor memory structure (Figure 2, 16) coupled to the processor, the semiconductor memory structure comprising:

a column line (Figure 3, 22) and row line (Figure 3, 20) associated with a programmable conductor random access memory cell (Figure 3, 18);

a programmable conductor memory element (Figure 4, 30) , a first terminal of which is coupled to the column line and second terminal of which is coupled to a first terminal of a zener diode (Figure 4, 32), wherein

a second terminal of the zener diode is coupled to the row line (Figure 3); and a sense amplifier (Figure 10, 56) for comparing a voltage on the column line with a reference voltage during a read operation to determined a logical state of the programmable conductor memory element (Column 9, lines 25-35).

Allowable Subject Matter

8. Claims 28-32, 35, 37-41, 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 28-32, 35, 37-41, 44 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Buerger, Jr. (U.S. Patent No. 2002/0050606), Harshfield (U.S. Patent No. 5,818,749), and others, does not teach the claimed invention having precharge circuits respectively precharging the column line and row line to a common predetermined voltage level prior to the read operation.

9. Claims 1-4, 6-13, 16-21, 24, 45-48 are allowed.

Claims 1-4, 6-13, 16-21, 24, 45-48 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Buerger, Jr. (U.S. Patent No. 2002/0050606), Harshfield (U.S. Patent No. 5,818,749), and others, does not teach the claimed invention having a method of sensing a stored value of a programmable conductor random access memory element including setting the row line and the column line to a common voltage level.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 703-306-9123. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on 703-308-4910. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3329.

Thong Q. Le
Examiner
Art Unit 2818

May 9, 2003